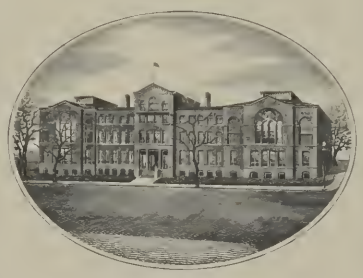

PAJOT'S OBSTETRIC TABLES.

OBSTETRIC TABLES

BY

Charles
DR. PAJOT,

Agrégé Professor to the Faculty of Medicine, Paris.

TRANSLATED FROM THE FRENCH, AND ARRANGED.

BY

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WITH

THREE ADDITIONAL TABLES

ON THE MECHANISM OF

NATURAL, UNNATURAL AND COMPLEX LABOR.

BY

NATHAN P. RICE, M. D. NEW YORK.

RICHMOND ENQUIRER BOOK AND JOB PRESS.
1856.

TRANSLATOR'S PREFACE.

There is no member of the Parisian faculty who has, at an early age, achieved a more honorable reputation than the author of the Obstetric Tables which are now translated for the first time into the English language. As assistant professor of the obstetric art in the Ecole de Médecine, Dr. Pajot has, at the age of thirty-five, obtained a most prominent position in the public estimation; and his thronged lecture rooms and large class of private pupils attest his popularity with the students—whilst his bold and original views are destined to make his name well known in the annals of midwifery.

In presenting the five tables which we have translated and arranged with great care, we do not design to append any explanatory remarks, as the admirable simplicity and methodical arrangement, pursued by the author, renders such an explanation unnecessary. The complete set offers to the student of medicine or to the practitioner, a perfect synopsis of all the difficulties of midwifery. He has before him at a glance the obstacles which he may have to meet, and the method by which he can overcome them. He may in a moment ascertain the value of a doubtful symptom, or explain the cause of an unexpected phenomenon. In addition to this, these tables give us the condensed literature of the subject down to the present day, more especially as regards the continental school of medicine; and wherever there is a difference of opinion held by the great lights in this department, each name is especially noted. We have thus at command an epitome of obstetrics, prepared after the best authorities, and also the various doctrines and opinions on all special points, held by such men as Depaul, Dubois, Stoltz, Velpeau, &c. whilst the vast practical experience of the celebrated *sages femmes*, Mesdames Boivin, La Chapelle, &c. is appealed to, in order to make the work perfect in all its parts.

In preparing these elaborate tables for the use of the English reader, we believe that the opportunity thus afforded them of seeing grouped together the important and difficult points in the practice of obstetrics, will render our labor appreciated by the profession of our country; and we hope that they will be found instructive to the student as well as the practitioner of medicine.

With the hope of rendering this work more useful to the profession, we have added three tables on "the Mechanism of Labor," which have been compiled with great care by Dr. Nathan P. Rice of New York city. These additional charts are devoted to the management of Natural, Unnatural and Complex Labor. They have been arranged by Dr. Rice after the most recent authorities, and exhibit marks of much labor and research. A short description of the causes and treatment of post partum hemorrhage closes the series.

TABLE OF THE SIGNS OF PREGNANCY ARRANGED IN METHODICAL ORDER,

By Dr. PAJOT, Professor "Agrege" to the Faculty of Medicine of Paris.

TRANSLATED BY O. A. CRENSHAW, M. D. RICHMOND, VIRGINIA.

SIGNS FURNISHED BY

FUNCTIONAL MODIFICATIONS
Furnishing Presumptive Signs.

- **MENSTRUATION** — SUPPRESSION. (The exceptions are VERY RARE, but suppression FROM OTHER CAUSES THAN PREGNANCY, IS COMMON.)—(P. Dubois.)
- **DIGESTION** — DERANGEMENTS. (Distaste, nausea, vomiting,) superexcitation of the function, (rare,) perverted taste, (common.) CONSTIPATION, (ordinary condition.) DIARRHŒA, (exceptional condition.)
- **SECRETIONS** — MAMMARY GLANDS. Irritation, swelling, colored areola, spotted appearance, projection, papillary tubercles, colostrum, milk.—KIDNEYS, kiestine, albuminous urine, diminution of the calcareous salts. SKIN, (moth, coloration of the linea alba.) SALIVARY GLANDS, (ptyalism.) MUCUS, (vaginal.)
- **NERVOUS SYSTEM** — NEURALGIA, dental, facial, &c.—NEUROSES, eclampsia, chorea, &c. (rare.)
- **CIRCULATION** — PALPITATIONS. VARICOSE VEINS, ŒDEMA, MODIFICATIONS OF THE BLOOD. (Diminution of the red globules and augmentation of the fibrine towards the end.
- **RESPIRATION** — MECHANICAL TROUBLES.

THE TOUCH
Furnishing two species of Signs.

I. MODIFICATION OF THE INFERIOR PART OF THE UTERUS. Signs of Probability, (P. Dubois,) or sensible signs.

OF THE NECK OF THE UTERUS.

- CONSISTENCE. Diminished—softening from below upwards, *gradual, to an extent equaling the softness of the vagina.*
- FORM OF THE *Cavity and Orifices.*
  - Primapara. *Cavity fusiform, external orifice* closed *until the period of labor.* Exceptionally (not very rarely) OPEN, *suffering the third of the last phalanx to enter.* (Pajot.)
  - Multipara. *Cavity funnel shaped,* or rather like a candle extinguisher. (Pajot.) External *orifice* largely open, internal *orifice* closed except in rare cases. At six months the finger will penetrate the length of the nail.
- LENGTH. *Modified only in the last weeks,* diminished. (Stoltz.)
- POSITION. Said to be lower at the commencement and higher at the end of pregnancy.
- DIRECTION. Inclined to the left and backwards, *result of the inverse inclination of the body.*

OF THE BODY. AUGMENTED IN VOLUME AND SOFTENED. (Caoutchouc.)

II. BALLOTTEMENT. Signs of Probability, or sensible signs, uncertain in some persons. — Sensation of a SOLID BODY floating and movable in a liquid, *perceived by the finger of the accoucheur,* placed either in the anterior cul-de-sac, (P. Dubois, Pajot,) or in the neck of the uterus itself. (Velpeau, Depaul.)

PALPATION
Furnishing two species of signs.

I. MODIFICATIONS OF THE SUPERIOR PART OF THE UTERUS. *Signs of Probability, or Sensible Signs.*

- VOLUME. Gradual augmentation,
  - At 9 months, a little below the EPIGASTRIUM.
  - " 8 . . . . . .
  - " 7 . . . . . .
  - " 6 . . . a little above the UMBILICUS.
  - " 5 . . . . . .
  - " 4 . . . . . .
  - " 3 . . . at the top of the PUBIS.
- CONSISTENCE. Diminished. Softening. Sensation of a cyst. Fluctuation *sometimes very distinct.*
- FORM. *In vacuity* pyriform; in gestation SPHEROID, then OVOID.
- DIRECTION. From right to left and from above downwards, (exceptionally from left to right.)
- POSITION. Slightly twisted on its axis so as to render the *left lateral wall a little anterior.*

II. MOVEMENTS OF THE FŒTUS.

- ACTIVE *or proper.* (Stoltz.) Of three kinds. IMPULSIONS against the lateral parietes, (the most common.) SUDDEN JERKING or starting. FRICTIONS, (the cold hand being placed on the abdomen,) certain, BUT MUST BE FELT BY THE ACCOUCHEUR.
- PASSIVE *or communicated.* (Stoltz.) OR ABDOMINAL BALLOTTEMENT. Sensation of movable bodies in a liquid.

Signs of probability.

AUSCULTATION
Furnishing two signs.

I. BRUIT DE SOUFFLE. *Signs of Probability, or Sensible Signs.* — ISOCHRONOUS with the pulse of the mother, EVANESCENT. Most often in the lateral and inferior region of the uterus. (PLACENTAL SOUFFLE. Kergaradec.) (ABDOMINAL SOUFFLE, Bouillard, *compression.*) (UTERINE SOUFFLE, P. Dubois, arteriovenous aneurism.) THREE distinct species of souffle in the uterus. (Pajot.) 1st. *Souffle without impulsion,* the most common. 2d. *Souffle with impulsion,* more rare. 3d. *Souffle in the fœtal heart,* very rare. I have also very rarely heard the whining sound, "bruit de piaulement," noticed by some accouchcurs.

II. SOUND OF THE FŒTAL HEART. *Certain Sign.* — THE TIC-TAC OF A WATCH: 130 pulsations per minute, (mean)—160 maximum—108 minimum, most frequently heard on the LATERAL and INFERIOR portions of the uterus and particularly on the left, from the great frequency of the left occipito-iliac anterior position. (*Compare this sound with pulse of mother.*)

PERCUSSION.

INDISPENSABLE IN SOME CASES OF DOUBTFUL PREGNANCY.

CLASSIFICATION OF THE DEFORMITIES OF THE FEMALE PELVIS IN CONNECTION WITH CHILD-BIRTH.

According to the Works of Nægele, P. Dubois, Velpeau, Danyau, Cazeau, &c.

MALFORMATION OF THE PELVIS

DIMINISHED CAPACITY. VERY IMPORTANT.

GENERAL (Velpeau.) Or with perfection of form. (P. Dubois.)

- In females of every size—CONTRACTED PELVIS is not SUSPECTED, the bones are natural in form, consistence, &c.
- In dwarfs. The bones retain the character of youth.

→ SHORTENING OF ALL THE DIAMETERS.

SPECIAL. Or with deformity of the bones.

BY ANTERO-POSTERIOR COMPRESSION *Flattening from before backwards.* (P. Dubois.) Most frequent malformation. — FOUR VARIETIES.

- I. The compression acting on the superior strait alone. PROJECTION FORWARD OF SACRO-VERTEBRAL ANGLE. Cavity and inferior strait natural, or oven larger than natural.
- II. Sacrum flattened, or even convex, and projecting forward. Superior strait and cavity diminished.
- III. Projection forward of the sacro-vertebral angle, projection in same direction of point of coccyx, curvature of the sacrum very much increased. Inferior and superior straits contracted. Cavity of pelvis enlarged.
- IV. Symphisis pubis flattened or looking inwards, or very much lengthened. ANTERO-POSTERIOR DIAMETERS LESSENED.

BY OBLIQUE COMPRESSION *Forcing in of the antero-lateral parietes.* (P. Dubois. Next to the most frequent variety.

- I. Of only one side, projection of the quadrilateral surface which corresponds to the bottom of the cotyloid cavity. OBLIQUE DIAMETER SHORTENED. — TWO VARIETIES.
- II. Of both sides. Separation and internal groove formed by the pubis. OBLIQUE DIAMETER SHORTENED. ANTERO-POSTERIOR DIAMETER LENGTHENED, but does not allow room for the head.
- III OBLIQUE OVOID PELVIS (of Nægele.) Principal characters. Anchylosis of one of the sacro-iliac symphises. *M. Cazeau and we deny the importance of this condition.* Faulty development of one-half of the sacrum and of the os innominata of the same side, the os innominata of the opposite side regular in appearance and yet deformed, &c. — THREE

BY TRANSVERSE COMPRESSION From one side to the other. (P. Dubois.) The most rare at superior strait and in the cavity; pretty frequent at inferior strait.

- I. Approach of the tuberosities of the ischium and of the rami of the ischium and pubis. INFERIOR STRAIT NARROWED. — 2 VARIETIES.
- II. One side of the pelvis less developed than the other. The spinal column not in the centre.

BY COMBINED COMPRESSION — Numerous VARIETIES.

- Pelvis bilobed, triangular, kidney-shaped, heart-shaped, pyramidal, trilobed, trapezoid, &c. (MAD. LACHAPELLE.)

INCREASED CAPACITY. NOT SO IMPORTANT.

Deviations, DISPLACEMENTS OF THE UTERUS, continuance of the uterus in cavity of pelvis during pregnancy, prolapsus uteri, TOO RAPID LABOR and its dangers.

→ Keep woman lying down from the commencement of labor, restrain her efforts before dilatation, sustain the uterus, prevent the rapid passage of child.

CAUSES

Of Malformation and Contraction.

Softening of the bones—Rickets—Malacosteon. Former alteration in another portion of the skeleton. Arrest of development.

DIAGNOSIS.

Facts in regard to the infancy of the individual. EXAMINATION OF THE PERSON, of the size (generally small) of the inferior limbs—(most frequently the thighs short, femurs bent, legs crooked,) of the gait, of the spinal column—(its deformity does not necessarily imply a deformed pelvis)—of the size of the cranium, &c.

EXTERNAL MEASUREMENT OF THE PELVIS with the compass of Boudeloque.

IN A WELL FORMED PELVIS from the top of the symphisis pubis to the first spinal process of the sacrum is ABOUT 7½ INCHES.

From the anterior superior spine of ilium to the opposite is ABOUT 9½ INCHES.

From the anterior inferior spine of the ilium to the opposite ABOUT 8½ INCHES.

INTERNAL MEASUREMENT with the pelvimeters of MADAM BOIVIN, VAN HUEVEL, STEIN, COUTOULY, &c. or better still, with THE FINGER—direct the index finger to the sacro-vertebral angle, mark on this finger with the other index the point where it strikes the symphisis pubis, allow 1 centimeter (about ½ inch) *and you have the antero-posterior diameter.*

PROGNOSIS.

IN REGARD TO PREGNANCY. Predisposes to premature labor. TO WOMAN AND CHILD, always grave.

Varying however according 1st. to the degree of contraction—2d. size of child and presentation, and 3d. the degree of energy of contractions.

INDICATIONS AND TREATMENT.

THE PELVIS CONTRACTED. Leaving (3¾ INCHES,) at least in shortest diameter.

- **VERTEX.** WAIT FIVE OR SIX HOURS AFTER COMPLETE DILATATION. The head being at the superior strait. At the inferior strait, wait two or three hours. APPLY THE FORCEPS. *I, myself, rather direct to wait as long as the contractions continue, and the condition of the mother and child is not dangerous.*
- **FACE.** Endeavor to convert into presentation of the vertex, FREQUENTLY IMPOSSIBLE. Apply the forceps without waiting as long so for the vertex.
- **PELVIS.** WAIT. Then moderate and guarded traction of the extremities. Artificial delivery of the head with the hands or the forceps.
- **TRUNK.** Attempt version by the head, then act as for the vertex presentation, if cannot succeed—version by the feet, then as for presentation of pelvis—pelvic version in all these cases according to Mad. Lachapelle and M. Simpson.

(3¾ INCHES) at most and (3 INCHES) at least.

IF THE CHILD IS ALIVE, wait some hours after the dilatation, then use the FORCEPS; if do not succeed, wait two or three hours longer, then apply forceps again—sometimes make a third application of them—finally, PERFORATE THE CRANIUM, wait, or better, apply the CEPHALOTRIBE. IF THE CHILD IS DEAD, use the last means sooner. Premature artificial accouchement at 7½ or 8 months—particularly if in former occasion the woman has not been delivered spontaneously or by the forceps. *P. Dubois exacts this last condition.*

(3 INCHES) at most and (2½ INCHES) at least.

PERFORATION OF CRANIUM and CEPHALOTRIBE, or symphisiotomy, (not practiced now,) after having waited as long as we can hope any thing from the contractions without compromising the condition of mother. (*Artificial delivery at 7 or 8 months.* Low diet to the mother.) (Moreau, Depaul.)

If in these two cases of contracted pelvis, the fœtus presents any other part except the vertex, attempt to bring this last to SUPERIOR STRAIT and act afterwards as directed.

If one side of the pelvis is LARGER THAN THE OTHER, (oblique ovoid, deviated spinal column,) such a position of the vertex *might require version.*

Less than (2½ INCHES.)

ATTEMPT EMBRYOTOMY AND THE APPLICATION OF CEPHALOTRIBE. Less than 5 centimetres, (2 inches,) nothing remains but the Cæsarian operation. The passage of the child is impossible by the natural route. Produce ABORTION if advised by MANY accoucheurs.

A SYNOPSIS OF THE TREATMENT OF HEMORRHAGE,

After MM. P. Du Bois, Chailly and Pajot.

TRANSLATED BY J. B. McCAW, M. D. RICHMOND, VIRGINIA.

BEFORE LABOR.

MODERATE HEMORRHAGE. A.

- HORIZONTAL POSITION.
- ABSOLUTE REST.
- FRESH AIR.
- COOL ACID DRINKS.
- LOW DIET.
- VENESECTION IF THERE ARE SYMPTOMS OF PLETHORA.
- EMPTY THE BLADDER AND RECTUM.

SEVERE HEMORRHAGE. B.

- SAME MEANS AS IN A, EXCEPT THE BLOOD LETTING, ...
- AT FIRST, COLD APPLICATIONS, ...
- THEN ERGOT. (Three doses of ten grains each at intervals of ten minutes,) — The ergot is here used as a hemostatic. In the cases which we suppose, there are yet no uterine pains. It is possible that the use of the spurred rye may produce the pains, for this medicine has the property of increasing the contractions when they are spontaneous, and it also can provoke them when they do not exist.
- IF THESE MEANS FAIL, APPLY THE TAMPON, AND IN SOME PARTICULAR CASES, PERFORATE THE MEMBRANES, ... — The tampon at first stops the hemorrhage; then by the retention of the blood as well as by its own presence it irritates the cervix and os uteri, and thus it encourages expulsive contractions. These dilate the orifice, and this dilatation will permit the rupture of the membranes and the termination of the labor

DURING LABOR.

MODERATE HEMORRHAGE.

- ORIFICE NOT DILATED AND NON DILATABLE.
  - MEMBRANES ENTIRE. — The same means as in A, except the blood letting which is not proper, unless the symptoms of plethora are very marked.
  - MEMBRANES RUPTURED. — The same treatment.
- ORIFICE DILATED.
  - MEMBRANES ENTIRE. — Same treatment as in A, then either WAIT, or RUPTURE THE MEMBRANES. — The rupture produces no bad consequences. It prevents the increase of hemorrhage. We can however dispense with it and wait until the progress of the labor stops the discharge. This latter course is perhaps the wiser; the more or less tendency to hemorrhage should determine the choice of the one or the other procedure. 1st. WAIT if the hemorrhage does not increase, and more especially if it diminishes; 2d. RUPTURE THE MEMBRANES, if we observe a tendency to an increased discharge. This rupture might perhaps be usefully preceded or followed by the administration of (a few doses of) ergot if the pains are feeble or infrequent.
  - MEMBRANES RUPTURED. — Same treatment as in A, then WAIT. If the pains are feeble and tardy, give ergot. — It is a question whether we should terminate the labor in this case since the parts seem prepared for it. We think if the fœtus presents well, it is better to abstain from all manipulation, application of the forceps, or version, since the use of these means would be more serious than the moderate hemorrhage for which we employ them.

SEVERE HEMORRHAGE.

- ORIFICE NOT DILATED AND NON DILATABLE.
  - MEMBRANES ENTIRE. — Same treatment as in A, except the blood letting. Then cold applications. In case of want of power, ERGOT; then rupture the membranes. Lastly, if the orifice will not permit turning, use the TAMPON. D.
  - MEMBRANES RUPTURED. — Same treatment as in A; then cold applications; then ERGOT if the pains are feeble and slow; then in case of insufficiency, compression of the uterus, TAMPON and ARTIFICIAL DELIVERY. — This is a very delicate point; the use of the tampon here demands great caution. In fact when the vagina is closed, the blood may, if you do not take care, collect in the uterine cavity to such an extent that the patient will sink without a drop of blood appearing externally, and the danger will be greater in proportion to the development of the uterus before the rupture of the membranes, and as the contractions are more feeble. The application of the tampon ought then to be preferred to delivery only when the contractions are sufficiently powerful, and if when the membranes ruptured, but a small quantity of water escaped; still its use requires the greatest watchfulness and a bandage should be firmly applied to the belly to resist any dilatation of the uterus. But when the contractions are feeble, and if a large quantity of water had passed when the membranes ruptured, it is perhaps better to overcome the resistance of the orifice and TURN. If the neck is thin, contracted, and resisting, INCISIONS should be previously made on each side of the os.
- ORIFICE DILATED.
  - MEMBRANES ENTIRE. — RUPTURE the membranes. If this does not suffice, turn, or, APPLY THE FORCEPS. — Here again we may be astonished at the rule to rupture the membranes and wait, before going farther, whether the contraction of the uterus has or has not stopped the flooding. It is because we think it so important both to the mother and child, that the birth of the latter should be the result of uterine contractions alone, rather than of operations frequently difficult, that it is very desirable to take the chance of a natural delivery as long as we can hope for it. It is well understood that this hope is only admissible when the contractions are neither feeble nor infrequent.
  - MEMBRANES RUPTURED. — VERSION, if the head is within the orifice; FORCEPS, if it has entered the cavity; simple extraction if the breech presents. — We can without doubt have recourse to the forceps, but the use of this instrument when the head is above the orifice and not engaged in the pelvis, frequently offers so many serious difficulties as to render turning more preferable.

SEVERE HEMORRHAGE, With Placenta over or near the Orifice

- ORIFICE NOT DILATED. . . . . — Same treatment as in D. — [Or separate the connections of the placenta and uterus, as proposed by SIMPSON and corroborated by TRASK. *Prize Essay.* Translator.]
- ORIFICE DILATED. . . . . — TURN and deliver at once, or SIMPSON'S method, (*Extract the placenta before the fœtus.*)

TABLE OF THE PRINCIPAL OBSTETRICAL OPERATIONS.

VERSION.

IN EVERY OBSTETRICAL OPERATION, PERSEVERENCE, PATIENCE, ATTENTION AND REPEATED EFFORT, are the precautions without which we should never attempt to employ force. (Lachapelle.)

WHEN WE WISH TO TURN, IT IS INDISPENSABLE: 1st. *that the orifice should be dilated or dilatable;* 2nd. *that the fœtal part,* (especially if it is the head,) *should not have passed the orifice.* It is favorable if the membranes are not ruptured.

VERSION IS INDICATED at all times when a grave accident menaces the life of either mother or child, and the danger can be dispelled by the prompt termination of the labor, the preceding conditions (1st and 2d) existing—when circumstances permit a choice between turning and the forceps, (the head being engaged in the superior strait,) *without exception, give the preference to the forceps.*

PREPARATIONS. Place the woman across a high bed, the nates projecting. FOUR ASSISTANTS—Empty the bladder and rectum—determine the presentation and position. CHOICE OF THE HAND. For the cephalic and pelvic extremities, *the hand whose palmar face regards the anterior plane of the fœtus;* for the shoulder, the choice of the hand is not so important. *Take off your coat.* Anoint the DORSAL face of the hand chosen, and then the entire forearm. Place the other hand, or that of an assistant upon the fundus of the uterus. WAIT the absence of contractions.

In addition to the usual preparations for labor we will require in turning, ligatures, a laryngeal tube, vinegar and a feather.

TURNING IS DIVIDED INTO

FIRST STAGE.
INTRODUCTION AND SEARCH.
Executed only between the pains. The hand should stop and become flat during the contractions.
A.

Introduce the hand like a cone, gently into the vagina. AT THE UTERINE ORIFICE if the membranes are entire, separate them as high as possible without rupturing them, or rupture low down and enter the bag. Penetrate very gently into the uterine orifice but without hesitation. (P. Dubois.) Follow the SHORTEST road to get to the feet (the position being known;) seize the foot FIRMLY which you find; (both if you can find them, but turning is often very well done with one foot.)

SECOND STAGE.
EVOLUTION. MUTATION. (Velpeau.)
PELOTONNEMENT. (P. Dubois.)
Same remark as at
A.

Extend slowly the member when seized. Draw the foot towards the vulva, thus impressing on the fœtus a movement in the direction of its natural flexion in such a manner as to turn the cephalic extremity of the child to the fundus, and its back towards one of the cotyloid cavities.

THIRD STAGE.
EXTRACTION OR DELIVERY.
This stage should be executed during a contraction, unless the patient should be dying or there should be some pressing symptom, inertia, hemorrhage &c

Wrap the foot or feet in warm linen. Exercise TRACTIONS and use lateral movements FOLLOWING THE AXES, at first DOWNWARDS. Take ample hold on the parts—*the hands of the accoucheur always near to the vulva* until the breech of the fœtus is disengaged. Make the hands act as splints for the articulations. Watch the umbilical cord; if it is stretched, make a loop of it. Permit the rest of the trunk to disengage itself unless there is something urgent, or the contractions are insufficient. If the arms disengage themselves, be contented with elevating the body and encouraging the woman to *bear down* so as to disengage the head. (We suppose the occiput under the symphisis pubis which is the rule.)

COMPLICATIONS AND DIFFICULTIES OF VERSION.

1st. THE POSITION IS UNKNOWN. We introduce the right hand; if it does not adapt itself to the position of the fœtus, we withdraw it and insert the other. 2d. CONTRACTION OF THE VULVA. Not serious, (*introduce finger by finger.*) 3d. ARM IN THE VAGINA (shoulder case.) Never amputate, unless you expect to practice embryotomy; even then the arm will be useful to make traction. Overcome the contractions by blood letting, opiate injections, tartarized antimony, chloroform. If turning becomes possible a fillet around the wrist (to prevent the arm passing up by the side of the head,) after having ascertained from the hand of the fœtus what shoulder presents and sometimes the position. *If version is impossible,* embryotomy. 4th. THE FŒTAL PART PREVENTS THE INTRODUCTION OF THE HAND into the orifice; push slowly in the direction by which we may produce a movement of evolution. 5th. WE CAN NOT FIND THE FEET. Endeavor to follow the lateral and posterior plane of the child. *If this is impossible,* carry the hand boldly but prudently to the FUNDUS OF THE UTERUS and search about for them. (P. Dubois.)

The difficulties which occur during this stage are generally those caused by uterine contraction. Generally this stage is easily accomplished if there is any water in the bag. IF THE HEAD ATTEMPTS TO ENGAGE WITH EITHER ONE OR BOTH THE FEET, a ligature on the feet; pressing back the head with one hand and drawing slowly with the fillet outwards.

1st. IF BY MODERATE TRACTIONS, IT IS FOUND IMPOSSIBLE TO TURN WITH ONE FOOT only, place a fillet on that foot and search for the other. 2nd. IN VERSION WITH ONE FOOT, if the other leg passes up before the trunk, hook the finger like a crotchet in the groin, *but do not extract this limb,* (its volume favors the easy passage of the head.) 3d. WHEN THE BACK TURNS FORWARD, gently perform an elongated spiral movement, try and see to which side the back is most inclined to turn. 4th. THE ARMS CLASPED ON THE SIDES OF THE HEAD, we must disengage them. Commence with the posterior arm, *or with the one most easily moved.* Elevate the trunk diagonally for the posterior arm, depress for the anterior arm; then the index and middle finger of the *most convenient hand* are slided *as far* as possible on the external and anterior aspect of the arm, the thumb being in the axilla (the other hand holding the body.) Always rotate the member towards the anterior plane of the fœtus. (For the other difficulties caused by the arms, vide Pajot's these des Concours, "*Des lésions traumatiques du fœtus.*") 5th. THE HEAD HAS NOT PERFORMED ROTATION. Introduce the index and middle finger of the hand, the palm of which best embraces the occiput; let them slide over the lower jaw of the fœtus and into the mouth; rotate the occiput behind the pubis. 6th. THE OCCIPUT IN THE CONCAVITY OF THE SACRUM; HEAD FLEXED. Carry the back of the fœtus towards the back of the woman. *Head extended,* pull the belly of the fœtus to the belly of the mother. If it is impossible to deliver, USE THE FORCEPS. 7th. THE HEAD IS MORE OR LESS EXTENDED IN THE PELVIC CAVITY OR THE STRAITS. Push back the trunk gently, then introduce two fingers *into the mouth,* two fingers of the other hand, *en fourche,* on the nape of the neck, and carry the back of the fœtus towards the belly of the mother, *encouraging her to bear down.* If it is impossible to deliver in this way, the *forceps* or *craniotomy,* depending on circumstances.

APPLICATION OF THE FORCEPS.

When we wish to apply the forceps, it is indispensable: 1st, that the orifice should be dilated, and the membranes ruptured; 2d, that the pelvis will permit the passage of the instrument. It is favorable when the head is engaged and fixed in the superior strait. *The forceps can only be applied to the head;* perhaps it might be applied to the breech if the child is dead.

The forceps is indicated whenever an accident threatens the health or life of either mother or child, *during labor.* The preceding conditions (1st and 2nd) existing, (inertia, hemorrhage, eclampsia, procidentia, &c.)

The application of the forceps is divided into

THE DIRECT APPLICATION

WHEN THE VERTEX PRESENTS.

(*This can only be done at the superior strait.*)

DIRECT POSITIONS { *occip-pubic.* / *occip-sacral.*

Preparations. *Common to every application of the forceps.* Position of the woman as in version. Four assistants. Empty the bladder and rectum. Ascertain the presentation and position. Warm the instrument in tepid water, and grease it on its *external surface.*

FIRST STAGE. Introduction and application of the branches. Each branch is composed of *the blades, the articulation & the handle.* The branch with the pivot, is the *left* or *male* or *pivot;* the other the *right,* or *female,* or *mortice.*

Left branch held in the left hand, always applied on the left of the woman and always first. It should be held with the whole hand, or as we hold a pen in writing. The *right* hand should be greased on *both faces: two fingers* of this hand in the vagina and always in the orifice if it is accessible, to precede and guide the blade. Two fingers of the right hand, and sometimes the whole hand save the thumb being introduced, the left branch is directed parallel to the right groin of the woman, the handle directed upwards. Depress the handle between the woman's legs, in proportion as the branch passes *between the hand* of the accoucheur and the *head* of the fœtus. The branch introduced following the axes, place the handle of the branch introduced on the left, parallel to the opposite thigh and give it to an assistant. Right branch. Rules reversed—right hand—on the right—the second, &c.—the second branch should always be applied above the first.

SECOND STAGE. Articulation.

The two branches having been placed on the same plane, and the mortice facing or by the side (according to the articulation) of the pivot, we bring them gently together and articulate. If we expect a laborious extraction, wrap a towel around the handles of the forceps.

THIRD STAGE. Extraction or disingagement.

Be positively certain (above all) that the head is seized and the head alone. Then make traction and lateral movements very slowly during the contractions, if there are any. We should pull with the arms and not with the body.

In the positions { Occipito-pubic we draw downwards, then the occiput disengaged, we raise the forceps. (1.) / Occipito-sacral, we draw upwards, then, the occiput being disengaged, we depress the forceps. (2.)

These two modes of extracting the head, (Vertex presentation) are the only two. All the oblique positions should be reduced to the *occipito-pubic* or *occipito-sacral.* (See Oblique Application of the Forceps.)

Presentation of the face { / Body delivered, } See Oblique Application.

THE OBLIQUE APPLICATION

WHEN THE VERTEX PRESENTS.

OBLIQUE POSITIONS, { 1. *Occip-iliac. Left ant.* / 2. *Occip-iliac. Right post.* / 3. *Occip-iliac. Right ant.* / 4. *Occip-iliac. Left post.*

General rule. To seize the head by the extremities of the *biparietal diameter,* (the ears.) Always turn the concavity of the forceps to that side of the fœtal region which it is necessary to bring behind the pubis. The region which must pass behind the pubis in the anterior position is the occiput; in the posterior the forehead.

FIRST POSITION. *Occipito-iliac left anterior.*

The fœtal region which must pass behind the pubis is the occiput; it is on the left and in front, then the concavity of the forceps is on the *left and in front;* then the *left branch* behind the head of the fœtus, the *right branch* before. (Articulate the instrument so that you may be sure. (Left branch, with the left hand, on the left and behind, first. The left branch should be applied at once in its exact position. The right branch is first applied on the right side of the pelvis, then by a spiral movement (Lachapelle) we carry it to its proper place. Observe the same precautions in the three stages as in the direct application: articulation—tractions—rotation of the occiput *behind* the pubis, then disengagement as in the *occipito pubic.* (See Direct Application.) (1.)

SECOND POSITION. *Occipito-iliac right posterior.*

Same rules as for the first, the forehead in the place of the occiput; but rotation into the sacrum, and extraction as in the *occipito-sacral.* (See Direct Application.) (2.)

THIRD POSITION. *Occipito-iliac right anterior.*

Same rules as for the first, only the occiput is on the *right* and in front; then the concavity on the right and in front, and then the *left* branch is before the head of the fœtus and the right branch behind. (Articulate the instrument so that you may be sure.) Disengagement in the *occipito pubic* position.

FOURTH POSITION. *Occipito-iliac left posterior.*

Same rules as for the third position. (The forehead replaces the occiput.) Disengage in the *occipito-sacral* position.

It has been proposed even in the *posterior* positions, to bring the occiput to the front in the 2nd and 4th positions. (Smellie & Danyeau.)

Transverse positions. Is in the corresponding anterior position—(*left* transverse as in the 1st position—*right* transverse as in the 3rd.

Presentation of the face—the *anterior* positions as in the vertex, (the chin replaces the *occiput*)—the *posterior* positions—either endeavor to *flex the head* (irrational,) or by two applications of the forceps bring the chin to the front.

The trunk delivered. Same rules as in the vertex. We ought always to prefer manual delivery when possible—the extraction is precisely similar to the spontaneous deliveries. (See the Works on Midwifery.)

COMPLICATIONS AND DIFFICULTIES WITH THE FORCEPS.

FIRST STAGE. Introduction and placing the branches.

1st. The position is unknown. Make a direct application; (if the rotation of the head is not effected, it will sometimes happen that it will occur after introducing one branch or whilst it is between the blades, or the head will turn and the forceps with it.) If the movement of rotation is not produced, the direct application will be irregular, but, in general the delivery will be the same in this case. 2nd. We cannot apply the second branch. Withdraw the first and commence with the other. *In oblique applications,* there is always more difficulty in applying one branch than the other: If it is the anterior, (the *right* in the 1st and 2d positions; the *left* in the 3rd and 4th,) we commence withthis one, but to articulate, (the mortice being under the pivot in the 1st and 2d positions,) because the second branch is applied *always above* the first, in these two cases we are forced to uncross the branches. 3rd. The extremity of one blade meets with some obstacle, withdraw it a little and direct it better. Never overcome resistance by force. *Note—This stage never permits the use of force. The branch ought as it were to pass in by its own weight, the hand being only a guide.* It is well placed when by pushing gently we can make it easily penetrate still deeper.

SECOND STAGE. Articulation.

We cannot articulate, 1st, because the pivot and the mortice are not on the same plane; gently twist the blades so as to bring the pivot and mortice together; feel your way; 2nd, *because one branch has penetrated deeper than the other;* withdraw the deepest one; pass the other in a little; feel your way—3d, *because the branches are too far apart,* and will not come together. The head is then irregularly clasped, or with the points of the blades. Both branches must be introduced deeper, *very cautiously* and following the axes. (When the head is high up, the articulation of the forceps ought generally to be at the entrance to the vagina; the pivot and mortice will then approach easily.)

THIRD STAGE Extraction.

1st. The head remains firm in spite of sufficient traction. (This is not often observed except when the pelvis is deformed, or the head very large.) Withdraw the forceps and try again some hours later. (See Table on Deformities.) 2nd. The forceps slip; do not draw *with the body,* for the instrument may suddenly slip and we may destroy the parts, and fall backwards with the forceps. 3rd. We are not sure of the position. Endeavor to ascertain this when the head reaches the vulva; if we are yet doubtful, extract still more cautiously; if there are contractions, we may sometimes withdraw the instrument. If we perceive that the application is very irregular, we may pursue the same course. 4th. The perineum threatens to give way notwithstanding all the precautions. Divide *the lower sides* of the vulva by two little incisions with scissors. (We must attempt this practice cautiously, although it is certainly useful in particular cases.) 5th. The points of the blades are still in the vulva, the head delivered. Disarticulate and withdraw the branches, one after the other, following the axes. The head extracted; no more contractions; the child suffers. Encourage the woman to bear down, find the axillæ; *do not withdraw the arms,* execute rotation with the shoulders, and extract the body, *drawing downward very slowly.*

CEPHALOTRIPSY. *Same rules as for the* DIRECT APPLICATION OF THE FORCEPS—Only redouble the precautions on account of the power of the instrument. Let an assistant be mounted on the bed and keep the head fixed. Carry the handle of each blade as far as possible backwards (against the perineum. The head seized, bring the branches completely together with the screw. Extract by tractions, using sometimes considerable force, turning the concavity of the cephalotribe a little to the left or right so as to place the *flat* surface of the head in the narrow diameter of the pelvis. Feel your way.

CRANIOTOMY. Executed with Smellie's scissors or any penetrating and strong instrument. General Precautions. Position of the woman as in the other operations. Introduce the hand except the thumb, slip the instrument up to the head. Raise the anterior part of the orifice if it is in the way. *Do not look for the sutures or fontanelles.* The point of the instrument applied on the cranium, forcibly depress the handle, then penetrate. (Black blood and cerebral matter.) Enlarge sufficiently the opening and withdraw the instrument carefully. (*Before practicing cephalotripsy, it is well to perforate.* P. Dubois.)

NATURAL LABOR

(UNCOMPLICATED, ENDING WITHIN TWENTY-FOUR HOURS.)

"MEDDLESOME MIDWIFERY IS BAD."

COMPILED BY NATHAN P. RICE, M. D.

AN ACCOUCHEUR SHOULD POSSESS a thorough fitness in his profession, (*a knowledge of what to expect and what to combat;*) great gentleness but decision of purpose; a good constitution, so as to be able to sustain any fatigue and deprivation of rest; a perfect freedom from any severe constitutional or contagious disease; sufficient strength for any emergency; patience, indefatigability, and THE CONFIDENCE OF HIS PATIENT.

WHEN ABOUT TO ATTEND A LABOR, he should take with him a female catheter, a gum elastic male catheter, a lancet, and in the country, and far from other physicians, a forceps, some ergot freshly powdered, and half an ounce of laudanum.

WHEN HE HAS REACHED THE HOUSE, his presence should be announced to the patient before he enters the chamber, in order to prevent any sudden mental emotion and cessation of the uterine contractions.

THE QUESTIONS TO BE ASKED of the nurse or friends should be, as regards the hour when the pains commenced, their frequency, duration and intensity. Whether there has been lately a passage of the urine or fæces.

A VAGINAL EXAMINATION should be at once performed, if the answers to these questions induce him to think the labor somewhat advanced. If not, it is better to wait, in order that he may judge for himself.

THE EXAMINATION should be made with as little exposure to the woman as possible. At the first one, there should be decided:

1st. THAT THE WOMAN IS PREGNANT, (*See table "signs of pregnancy."*) 2nd. THAT SHE IS IN LABOR. (*During the last months of pregnancy, women are often troubled with false pains, depending upon a sympathetic disturbance of the intestines, or some of the abdominal viscera. False pains are generally situated over the portions diseased or disturbed. True pains commence at the umbilicus, and gradually moderate to the region of the perineum or anus. The first are general y continued; the last intermittent. The decision is sometimes difficult, and we must be guided by the other phenomena of labor; the hardness of the uterus, the rigidity of the neck, the tension and protrusion of the membranes at a contraction, the relaxation and softening when it ceases. The contractions of the uterine fibres commence at the mouth, and are propagated to the fundus. If vice versa the pains are false.*) 3rd. THAT SHE HAS ARRIVED AT THE FULL TERM. 4th. WHETHER THE MEMBRANES ARE RUPTURED OR NOT. 5th. HOW FAR THE LABOR IS ADVANCED. 6th. WHAT IS THE STATE (as regards softness and resistance) OF THE MOUTH AND NECK OF THE UTERUS, THE VAGINA, THE PERINEUM. 7th. WHETHER THERE IS ANY ABNORMAL DEVIATION IN THE PELVIS. (See table.) 8th. WHAT IS THE PRESENTING PORTION OF THE FŒTUS. 9th. WHETHER THE CHILD IS ALIVE OR NOT, (*auscultation, flaccidity and softness of the skin and tongue; folding of the skin of the head,* (Merryman)—*constriction of the anal sphincter, absence of pulsation in the umbilical arteries, fetidity and thickness of the amniotic fluid.*) (A mucous discharge from the vagina (the shows) generally makes its appearance about twenty-four hours before labor commences.)

THE CHAMBER should contain a fire in an open fire place, be well ventilated, but without draughts, of a temperature of about 65° Fahr.—(*if it is too warm, there is danger of hæmorrhage or convulsions; if too cold, of subsequent inflammations, or chronic engorgements*)—free from any strong odors, with a good light, and not near any thing producing noise.

BUT TWO OR THREE ASSISTANTS should be allowed to be present, the nurse and the mother and sister, or most intimate friends.

THE ARTICLES NEEDED will be, the ligatures for the cord, (cotton wicking is good for this,) some soft cloth to bind the umbilical cord, a broad binder for the abdomen of the mother, some olive oil or sweet grease, plenty of warm water and towels; and WITHOUT THE KNOWLEDGE OF THE PATIENT, ice and ice water, aromatic vinegar or smelling salts, and a little brandy. (*The last articles will not probably be needed, but it is better to have them at hand.*)

THE BED best adapted is the cot bedstead, with no end or side pieces, so that there can be free access from all sides. The head of it should lie against the wall. One mattress should be laid upon it in its whole length, and upon it another folded back upon its upper third. A piece of oil cloth should be spread upon the lower mattress, and covered with a sheet. If it is desirable to use the ordinary bedstead, and the one upon which the woman is to remain, the sheets should be folded lengthwise in the middle with the bed clothes, and laid along upon the right half of the bed. Upon the left half the oil cloth should be spread, covered as before with a sheet.

THE POSITION OF THE WOMAN in France, where the little bed is most used, is to recline the back and shoulders upon the plane formed by the upper mattress, the lower extremities being extended upon the oil cloth laid upon the lower mattress. In the case of the other bed, the woman should lie upon her left side, with the thighs and legs bent, and the back turned towards the left side of the bed.

THE CLOTHING should be loose, and not too long, so that free movements will not be obstructed. The chemise and bed gown should be neatly gathered up under the arms and shoulders, to prevent soiling, and the lower limbs should be covered only with a flannel petticoat.

IF CONSTIPATION EXISTS, an injection should be administered. If there has been NO PASSAGE OF URINE for some time, and the woman cannot accomplish it by her own efforts, practice catheterization.

LABOR

1st PERIOD. DILATATION OF THE OS TINCÆ. (*Cutting or Grinding Pains.*) From 6 to 15 hours.

THE CRIES are sharp and piercing, and expressive of suffering, as when made by a cutting instrument. THE PULSE is natural, or slightly quickened during a pain. (Hohl.) THE SKIN is of the usual temperature, and free from perspiration. If the finger is kept upon the os uteri, it will be found to tighten and become hard at each pain. When pressed upon by the head, the circle retracts at each pain. The advance of the labor is known by this enlarging of the os. The rate of dilatation is slowest at the beginning. The time occupied in dilating to an inch in diameter is estimated as being as long as for the rest of the dilatation. THE SHOWS during this period are marked with striæ of blood.

If the diagnosis of the position has been impossible, or if there is found to be a malpresentation, it is imperatively necessary for the accoucheur to remain constantly by the woman; but if the position is favorable, and the dilatation proceeds very slowly, he may absent himself, returning every two hours. If he remains, he should not be constantly in the chamber, as his presence may irritate or terrify the woman, or prevent her from fulfilling often enough the requirements of nature. Most women are anxious that the physician should always remain within call. The patient should be allowed full liberty of motion, to lie or sit down, or to walk about, as the change has been found to favor the contraction.

2nd PERIOD. DESCENT INTO THE CAVITY. (*Bearing down or Forcing Pains.*) From 1 to 6 hours.

The breath is often suspended from the necessity of fixing the chest as a fulcrum. ALL CRYING IS STOPPED. The efforts made are VIOLENT. The veins of the head and neck become prominent. The temperature of the body is raised, and the surface is covered with perspiration. The pulse is increased in frequency. The head progresses slowly, ADVANCING a little during a contraction, and RECEDING almost to the same point after its cessation.

The accoucheur should afford what relief can be given by moderate pressure to the back or over the loins, or he should sustain the fœtal head by equable support with the hand, if there seems to be too rapid progress. The patient should be made to recline upon the bed.

3rd PERIOD. EXIT OF THE FŒTUS From a few minutes to half an hour.

THE HEAD is generally expelled by one violent effort accompanied with a LOUD CRY of anguish. This is followed by a short period of comparative repose, when the next pain or few pains will accomplish the disengagement of the TRUNK.

The accoucheur, as soon as the head has commenced to distend the perineum, should support it by forming a plane with his hand, the fingers pressing against the perineum, and the head resting against the palm in such a way that it can easily perform its rotation. If the delay after the exit of the head is too long, and the life of the infant becomes endangered, friction should be performed over the uterus, or the fingers should be placed under the axilla, and traction exercised. If the cord is found around the neck and threatening strangulation, it should be slipped over the head; but if this cannot be done, the child must be extracted as soon as possible. As soon as the child is born, it should be deposited in the hands of one of the assistants. When there has been one prolonged inspiration and cry, the cord should be tied at three inches from its insertion, and again at an inch or more above that. The section should be made between them.

4th PERIOD. EXPULSION OF THE PLACENTA. From a few minutes to two hours.

In some cases the placenta is expelled with the child; but most commonly it remains detached in the uterus or vagina, from which the contractions or moderate traction will expel it. If it cannot be removed within a reasonable time it is considered as a case of RETAINED PLACENTA.

If the placenta is not soon expelled, friction should be made over the abdomen, and pressure over the uterus. If it is a case of retained placenta, it must be extracted by the introduction of the hand.

ATTENTIONS REQUIRED AFTER THE BIRTH.

BY THE CHILD.

The child should be at once examined, to see if any defect in its organization exists—if there is harelip, an occlusion of the anus or urethra, a hernia, any fracture or deformity, any oozing from the cord, or what its general condition is as regards size, health, feebleness, &c. The caseous coating should then be removed with sweet oil or the white of an egg, and the infant thoroughly washed with warm water and soap. The cord should now be enclosed in a well oiled piece of cloth, about four inches square, in the centre of which a hole has been cut for the introduction of the cord. The whole to be confined by a broad flannel roller encircling the abdomen, but not tightly. The infant can now be dressed.

BY THE MOTHER.

Our first step should be to make another examination to see, 1st. That the uterus is in position; that it has not been inverted; (it will be felt still large, soft and uncontracted.) 2nd. That there does not remain another fœtus. After the expulsion of the placenta, the woman should be left to repose for half an hour, which can be devoted to the care of the child. Then the genital organs should be washed with warm water and thoroughly wiped. The night clothes gently drawn down from under the shoulders, and the soiled sheets, &c. removed. The bed clothes can be brought over from the right side of the bed, and passed under the woman, disturbing her as little as possible in the action. If she has been confined upon another bed than the one upon which she is to lie, she should be removed in a reclining position, by bringing the two beds side to side. She should by no means be allowed to rise and walk to it, or assist herself in any way. The roller, which should be more than a foot in width, and long enough to encircle the body twice, should now be applied, covering the hips and the body to the epigastrium. A warm towel should also be laid over the vulva.

UNNATURAL LABOR,

(COMPLICATED OR NOT, LASTING OVER TWENTY-FOUR HOURS.)

COMPILED BY NATHAN P. RICE, M. D.

UNNATURAL OR ABNORMAL LABOR

TEDIOUS LABOR.

HEAD PRESENTATION, Ended without manual assistance, but lasting over 24 hours. The delay is in the FIRST PERIOD

Is very rarely dangerous for mother or child.

MENTAL EMOTION. Any sudden shock, as fright, dejection, anger, &c. can for a time put a stop to the dilatation; but after a period of suspense, it will commence again. It is not so often met with as in the second period.

INEFFICIENT ACTION OF THE UTERUS. Occurs most commonly in delicate women confined for the first time, from the cause given above, constitutional weakness, a deranged condition of the digestive organs, uterine plethora, irritation of the os and cervix uteri, &c. Endeavor to calm the mind of the patient, open the bowels, by slightly stimulating enemata, and for the plethora a small bleeding. If the patient is much exhausted, give a FULL DOSE OF OPIUM. If, after rest, the pains do not return, ADMINISTER ERGOT.

OBLIQUITY OF THE UTERUS. DENIED BY MANY WRITERS. If such effects are produced, they occur most commonly in the second period. If the inclination is forwards, the woman should lie upon her back. If to one side, she should lie upon the side opposed. Nature will remedy the difficulty.

EXCESS OF LIQUOR AMNII. This cause is rare and difficult to diagnose. The dilatation is generally accomplished after a time. If not, the membranes must be ruptured.

TOUGHNESS OF THE MEMBRANES. If there does not seem to be any tendency to rupture, it must be done with the finger, during a pain, and when the membrane is tense; but this course should never be resorted to unless the OS IS WELL DILATED, and the membranes are protruding into the vagina.

PREMATURE ESCAPE OF THE AMNIOTIC FLUID. Leaving nothing but the head of the child to act as the wedge in dilatation. Although prolonged, it will be accomplished naturally.

UNDILATABLE OS UTERI. With the first child, or in women of advanced age, this sometimes occasions delay. If there is danger of laceration of the uterus, bleed to 15 or 20 ounces, and give tartarized antimony. But time seems to be the best remedy. (*The practice of incising the os, recommended by some authorities, should be resorted to only in extreme cases, and when there is immediate danger of ruptured uterus.*)

POWERLESS LABOR.

Prolonged in the SECOND PERIOD.

Dangerous according to its length.

INEFFICIENT ACTION OF THE UTERUS. The commencement of the cessation of contractions is shown by irregular action, the contractions get weaker, or the intermission becomes longer, or they may cease suddenly. Our treatment must be guided by the condition of the mother, not by time. Administer ergot, or if prompt delivery is demanded, use the forceps.

MENTAL EMOTION. In this period, delay from this cause is common. A period of calm and rest will soon bring on the contractions again. (The patient is often much encouraged by being assured of the favorable presentation, (if such should exist,) and the pains will increase in frequency and force.)

OBSTRUCTED LABOR

The uterus acts with energy, but there is a mechanical obstacle to the delivery

Is experienced in the three first periods.

THE OBSTRUCTION IS CAUSED BY THE SOFT TISSUES.

MINUTE OR IMPERFORATE OS UTERI. Permit a long time to elapse (depending on the condition of the woman) in the hopes that nature will effect a dilatation. If a minute opening is found, but there is no tendency to dilatation, bleed and give tartarized antimony. If no opening can be found, and there is danger of a rupture of the uterus, open by an incision or incisions where a pit or protuberance may lead us to suspect the place for the os. It is occasioned by the healing of some old ulceration, whether before or after conception, or by a total absence of neck to the womb.

CARCINOMA, OR SCHIRRHUS OF THE UTERUS. Women have been delivered where a severe stage of this disease existed; but if there is no tendency to dilatation, use the knife as before, and if necessary, version or the forceps.

NARROW OR UNDILATABLE VAGINA. If it occurs in very young or very old persons, or if it arises from old cicatrices, (*known by the hard and gristly feeling,*) nature will generally overcome the obstruction. But if there is danger of laceration, or if the sides of the vagina are adherent from cicatrices, various small incisions must be made in the mucous tissues.

SOFT TUMORS. Fibrous, adipose, carcinomatous or schirrus tumors in the vagina, polypus, hydatids, or cauliflower excrescences of the uterus, or an ovarian tumor, may obstruct the labor. If the tumor is of such a character that it cannot be removed, or if the delivery is completely prevented, CRANIOTOMY must be performed

VAGINAL CYSTOCELE. If the bladder has not been emptied for some time previous to the labor, if the labor has been very long, or if there is an absence of power over its walls, it may become so distended as to obstruct labor. The urine must be drawn off, (*most easily by an elastic male catheter.*)

CALCULUS IN THE BLADDER. If very large, the calculus can sometimes be raised above the pubis, where it will be kept by the pressure from the head of the child; but if there is danger of a laceration of the bladder, it must be at once extracted by an incision; nature will eventually overcome any obstacle from a small one.

VAGINAL HERNIA If a loop of intestine has entered the vagina, it must be reduced as early as possible. The pressure of the child's head will prevent its descent again. If fæces have become impacted in it, and there is danger of laceration, use the forceps.

COLLECTION OF FÆCES IN THE RECTUM. The impaction will be detected by a rectal examination. The mass must be removed by warm injections.

SWELLING, ŒDEMA. THROMBUS. This is best alleviated by bleeding and the use of antimony, or by free incisions of the part. If the inflammation is so great as to threaten subsequent sloughing, use the forceps.

IMPERFORATE HYMEN. When the head has reached the orifice, and the toughness of the hymen prevents its exit, divide it with a scalpel.

RIGIDITY OF THE PERINEUM. Sometimes occurs in elderly people, or as a result of cicatrices. Friction with oil, and time will most probably remedy it.

INVERSION OF THE VAGINA. The mucous tissue is pushed in front of the head. The forceps must be used.

THE OBSTRUCTION IS CAUSED BY THE BONY TISSUES.

OSSEOUS TUMORS. A simple exostosis growing from the sides of the pelvis or from the sacrum, a protuberance from a badly united fracture of the pelvis. The treatment must be guided by the same rules as for a contracted pelvis. (See table "Deformities of the Pelvis.")

DEFORMED PELVIS. (See table "Deformities of the Pelvis.")

THE OBSTRUCTION IS CAUSED BY THE FOETUS.

HYDROCEPALUS. APPLY THE FORCEPS, and if the delivery is then found impossible, draw off the serum with a trocar.

HYDROTHORAX AND ASCITES. Both causes are excessively rare. APPLY THE FORCEPS, or if necessary endeavor to draw off the fluid.

GENERAL EMPHYSEMA. Only met when the child is dead. If the child cannot be extracted by the forceps, allow the escape of the gas by an abdominal puncture.

TUMORS. Sometimes pediculated and torn away. If not, the forceps must be used, as no early diagnosis of their existence can be made.

ANCHYLOSIS OF THE ARTICULATIONS. The pressure of the contractions will sometimes break the union. Use the forceps, or remove the child piece meal.

EXCESS OF VOLUME. If time does not remedy the difficulty, apply the forceps, or if necessary, cephalotripsy.

MONSTERS. A single fœtus, unless remarkably deformed, will generally be born as easily as in normal labor. Cases, however, are on record, when from more than the usual number of legs or arms, it has been necessary to interfere.

Two united together are more likely to prevent delivery. If necessary, they should be separated, or removed in portions—endeavoring to preserve one entire.

PLURAL BIRTHS.

The first child may be born easily, and within a reasonable time, but the delay may be in the delivery of the second, or the first may have a delayed delivery, the second being expelled as soon as common, or both may experience delay. If the delay in the delivery of the first has been long and painful, and the mother is greatly prostrated, we should hasten the expulsion of the other by version or the forceps, leaving the latter part of the performance to nature. If any serious complication threatens the life of the mother or child, we should also interfere. But if the delay has been the only trouble, we should wait patiently for a result from the uterine efforts alone.

MALPRESENTATION OF THE FŒTUS.

The malpresentation may be an irregular or inclined position of the vertex, a presentation of the face, the shoulder, lower extremities, buttocks or trunk. The delay will be caused by the greater or less time required by the uterus to remedy the trouble, or the period that is allowed to elapse before mechanical assistance is afforded. The remedy is CEPHALIC or PELVIC VERSION, the choice being guided by the presentation.

COMPLEX LABOR

(The delivery either natural or unnatural, but attended or followed by some accidental complication.)

COMPILED BY NATHAN P. RICE, M. D.

COMPLEX LABOR

RESULTING FROM THE PLACENTA AND THE FUNIS.

UNDUE SHORTNESS OF THE CORD. The shortness may be actually in the cord itself, (*sometimes reduced to four inches,*) or caused in a cord of natural length by turns around the body, neck or legs of the fœtus. The shortness can delay the labor, render it impossible, or cause the death of the fœtus, (by the obstruction of the circulation, or by the separation of the placenta;) induce hæmorrhage by tearing away the placenta, or invert the uterus. The turns should be removed from the fœtus if possible. If this cannot be done, prompt delivery must be effected.

UNDUE LENGTH OF THE CORD. The only dangers from this are in causing a prolapse of the cord, a predisposition to form turns about the fœtus, or in becoming so compressed between the fœtus and the walls of the uterus or pelvis without prolapse as to obstruct the circulation.

PROLAPSE OF THE CORD. The causes are, 1st, too great length of the cord; 2nd, too great quantity of amniotic fluid; 3rd, some abnormal deviation of the pelvis; 4th, an obliquity of the uterus; 5th, a malposition or presentation of the fœtus; 6th, an insertion of the placenta over or near the uterine orifice; 7th, the sudden rupture of the membranes and escape of the fluid—ONLY DANGEROUS FOR THE FŒTUS, by causing an interruption of the circulation. If the child is dead, if the contractions are strong, and it seems certain that the delivery will be soon accomplished, or if the head is small and the pelvis roomy, and the circulation uninterrupted, we should leave all to nature. But if the contrary cases exist, DELIVER AT ONCE WITH THE FORCEPS. Some authors have recommended the pushing of the cord up into the cavity by the side of the head or above the brim, or the looping of it over the head of the child, but both acts are difficult and dangerous.

RETENTION OF THE PLACENTA. The causes are, inertia of the uterus, irregular contraction, (*constriction of the fibres of the neck, hour glass contraction, contraction of the circular fibres, making a cylinder,*) OR MORBID ADHESION BETWEEN THE UTERUS AND PLACENTA. If after a reasonable time and friction over the abdomen it is still retained, or if there is hæmorrhage, we should give ergot, or at once extract it with the hand. It must not be left in the uterus, as its putrefaction will tend to bring on inflammation and phlebitis. To extract the placenta, the right hand should be introduced conically into the uterus, taking the cord as a guide. The placenta should be separated from its attachments to the uterus, (as you would cut the leaves of a book with a paper knife. Cæsean.) The left hand should be applied over abdomen in order to bring on contractions, which shall expel the hand grasping the placenta, and thus endeavor to avoid dangerous hæmorrhage. (INJECTION OF THE FUNIS with cold water may be also attempted, with some hope of success.)

FLOODING. See table "Treatment of Hæmorrhage."

RESULTING FROM ACCIDENTS TO THE WOMAN.

CONVULSIONS.

HYSTERIC. The causes are, sudden emotion, want of sleep, excessive fatigue, or disordered digestion. It is characterized by the ordinary peculiarities of hysteria, (*previous hysterical or nervous state, generally natural breathing, complete return of intelligence during the intervals, &c.*) The labor may be stopped at each paroxysm, but will commence after its cessation. If the pulse is quick, bleed; but an enema of assafœtida, with aromatics to the nostrils, and cold water upon the head and chest, are our best remedies.

APOPLECTIC. Said to be the oftenest met with towards the CLOSE OF LABOR, or after its termination. Caused by an extravasation of blood from the efforts in straining. Its characteristics are those of apoplexy from other causes, (*flaccidity of the body, absence of power over the muscles, loss of intelligence, stertorous breathing, absence of motion, except at the commencement, &c.*) The child must be delivered at once by the FORCEPS or by VERSION.

EPILEPTIC. THE MOST COMMON of the three kinds. The symptoms resemble very closely common epilepsy, (*great muscular action, frothing at the mouth, biting of the tongue, intervals of quiet and consciousness, sibilant respiration, power over the muscles, &c.*) THE PROGRESS OF THE LABOR DOES NOT SEEM TO BE GENERALLY INTERFERED WITH. The pains are generally more severe, and the commencement of one may bring on an epileptic paroxysm. The danger of subsequent inflammation, which has been pointed out, (Denman, Collins,) renders powerful treatment necessary. The best remedy seems to be BLEEDING to a large quantity and by a full stream. This is to be repeated, if necessary. This should be followed by a full dose of jalap and calomel, and when the symptoms have abated, by opiates in small quantities. IF THE CONVULSIONS CONTINUE, and the labor is interfered with, the child should at once be delivered by VERSION or the FORCEPS.

LACERATIONS.

RUPTURE OF THE UTERUS AND VAGINA. Caused by a diseased state of the part, unequal pressure of the child, too powerful and prolonged contraction in a case of obstructed labor, misuse of the forceps, two great force used in traction, labor at an advanced age, &c. The child must be delivered at once (if the orifice is dilated) by the FORCEPS or VERSION, or by CEPALOTRIPSY. If the child has passed into the abdominal cavity, it must be extracted by the introduction of the hand. If the uterus is so contracted that this cannot be done, a CÆSARIAN SECTION must be made.

VESICO VAGINAL AND RECTO VAGINAL FISTULA. Caused by too great pressure from a large child, deformity of the fœtus, or the misuse of instruments. The child, if the labor is delayed, must be delivered by the FORCEPS.

RUPTURE OF THE PERINEUM. Caused by excess of pressure from a large head, deformity of the pelvis, too rapid passage of the head, excessive breadth of the perineum, a tough and undilatable or diseased perineum, misuse of instruments, not adequate support afforded by the hand during the pressure of the head, and malposition of the fœtus. The rupture will probably hasten the delivery of the child.

INVERSION OF THE UTERUS. Caused by shortness of the funis, too powerful traction in version or in using the forceps, violence in extracting the placenta, too quick delivery when the pelvis is abnormally large. It is remedied by placing the hand closed, against the fundus, and forcing it back into its position. The hand is to be retained in the uterus (friction being at the same time made over the abdomen) until the contraction of the organ shall expel it.

ON POST PARTUM HEMORRHAGE.

BY J. B. McCAW, M. D.

HEMORRHAGE AFTER DELIVERY is almost always the result of INERTIA OF THE UTERUS. THE CAUSES of hemorrhage from inertia are either predisposing or determining.

THE PREDISPOSING CAUSES are, 1st. A plethoric habit and a predisposition to copious menstruation in the unimpregnated state. 2nd. A lymphatic temperament occurring in women of lax muscular fibre and nervous, irritable constitutions. 3rd. A hemorrhagic diathesis. (The occurrence of a profuse flooding in former labors should always warn the accoucheur against the repetition of the same event, and should lead him to take every precaution for its prevention.)

THE DETERMINING CAUSES are, 1st. The exhaustion of a long and painful labor. 2nd. A too rapid labor either from an over sized pelvis, or a want of resistance at the perineum, permitting the hasty passage of the fœtus. 3rd. Excessive distention of the womb from an excess of fluid or a twin pregnancy.

THE TREATMENT OF POST PARTUM HEMORRHAGE IS DIVIDED INTO:

THE PREVENTIVE TREATMENT. In women of full habit, and whose menstrual discharges have been usually copious, repeated bleedings in the last months of pregnancy. In women of a feeble and lymphatic temperament, GIVE ERGOT in ten grain doses about an half hour before the child is born. Sometimes it is well to rupture the membranes early, and apply a bandage to the abdomen, which should be gradually tightened as the labor advances (Robert Lee.)

THE CURATIVE TREATMENT. The indication of cure is to produce immediate UTERINE CONTRACTION. FIRST GIVE ERGOT, then INTRODUCE THE HAND INTO THE UTERUS. Carry it boldly up to the fundus, and MOVE IT FREELY ABOUT, clearing the cavity of coagula, and ENDEAVORING TO EXCITE CONTRACTION. The other hand should be dipped in ice water, and placed over the abdomen. Use frictions on the hypogastrium, with firm pressure upon the body of the womb. If this fails, cold water should be POURED from a pitcher over the abdomen, the right hand being still in the womb, (OR THE COLD AND HOT DOUCHE ALTERNATELY.) When the uterus begins to contract, DO NOT WITHDRAW THE HAND, but wait until it is expelled by the action of the womb. THE TAMPON is recommended by some authors, (Leroux, Chevreul,) but should be avoided. DO NOT CONVERT AN EXTERNAL INTO AN INTERNAL HEMORRHAGE. As a last resort, PRESS THE UTERINE WALLS TOGETHER, by means of a folded napkin over the hypogastrium, and a very tight bandage, (Deneux,) OR COMPRESS THE AORTA, by depressing the abdominal walls, just above the fundus of the uterus, with the four fingers of one hand, when the pulsations of the artery will be distinctly felt. (Baudelocque.)